# IDENTIFYING BARRIERS AND TARGET COMPLIANCE FOR SELF-CARE IN TYPE 2 DIABETES PATIENTS

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**ABSTRACT:** The objective was to identify barriers and compliance with targets for the development of self-care practices in chronic patients suffering from type 2 Diabetes Mellitus. Descriptive and exploratory study involving 30 users, undertaken through home visits at three primary health care services in Belo Horizonte, Minas Gerais in 2014. The barriers and targets cited were analyzed using relative frequencies and grouped into categories. 63.1% of the users presented difficulties related to psychosocial and cultural behaviors, 16.5% to environmental and structural behaviors, 3.3% economic behaviors, 6.6% related to other factors and 10% did not consider they had any relevant difficulties to take care of their health. Sixty percent of the users are capable of seeking solutions for the barriers and of making informed decisions that are appropriate to their health and life context, trying to find solutions to cope with barriers in diabetes self-care practices.

**DESCRIPTORS:** Health education; Diabetes Mellitus; Self-care; Nursing.

# IDENTIFICANDO BARREIRAS E CUMPRIMENTO DE METAS PARA PRÁTICA DE AUTOCUIDADO EM PESSOA COM DIABETES TIPO 2

**RESUMO:** Objetivou-se identificar barreiras cumprimento de metas para o desenvolvimento das práticas de autocuidado em usuários com a condição crônica do diabetes Mellitus tipo 2. Estudo descritivo exploratório, realizado com 30 usuários, mediante visita domiciliar, em três unidades básicas de saúde de Belo Horizonte, Minas Gerais durante o ano de 2014. As barreiras e metas citadas foram analisadas mediante frequência relativa e agrupadas em categorias. 63,1% dos usuários apresentaram dificuldades relacionadas a comportamentos psicossociais e culturais, 16,5% a ambientais e estruturais, 3,3% econômicos, 6,6% relacionaram a outros fatores e ainda 10% não consideraram ter dificuldades relevantes para cuidar da sua saúde. 60% dos usuários demonstraram disposição para planejamento e cumprimento de metas. Conclui-se que o usuário é capaz de buscar soluções para as barreiras e tomar decisões informadas, adequadas à sua saúde e contexto de vida, buscando soluções para o enfrentamento de barreiras nas práticas de autocuidado em diabetes.

**DESCRITORES:** Educação em saúde; Diabetes Mellitus; Autocuidado; Enfermagem.

# IDENTIFICANDO OBSTÁCULOS Y CUMPLIMIENTO DE METAS PARA PRÁCTICA DE AUTOCUIDADO EN PERSONA CON DIABETES TIPO 2

**RESUMEN:** Fue objetivo del estudio identificar obstáculos y el cumplimiento de metas para el desarrollo de las prácticas de autocuidado en usuarios con la condición crónica del diabetes Mellitus tipo 2. Estudio descriptivo exploratorio, realizado con 30 usuarios, por visita domiciliar, en tres unidades básicas de salud de Belo Horizonte, Minas Gerais durante el año de 2014. Los obstáculos y metas citados fueron analizados por medio de frecuencia relativa y agrupados en categorías. 63,1% de los usuarios presentaron dificultades referentes a comportamientos psicosociales y culturales, 16,5% a ambientales y estructurales, 3,3% económicos, 6,6% relacionaron a otros factores y 10% todavía no consideraron tener dificultades relevantes para cuidar de su salud. 60% de los usuarios demostraron disposición para planeamiento y cumplimiento de metas. Se concluye que el usuario es capaz de buscar soluciones para los obstáculos y tomar decisiones informadas, adecuadas a su salud y contexto de vida, buscando soluciones para el afrontamiento de obstáculos en las prácticas de autocuidado en diabetes.

**DESCRIPTORES:** Educación en salud; Diabetes Mellitus; Autocuidado; Enfermería.

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## **INTRODUCTION**

Education for self-care of the diabetes condition provides the users with knowledge, attitudes and skills needed to perform self-care and change behaviors, especially in nutrition and physical exercise. The users are confronted with barriers related to behavioral and psychosocial aspects. It is important to consider that the multiple factors involved in self-care difficulties end up making the care process complex. Attempting to understand the barriers and mainly addressing them according to each user's life context is essential to plan and systemize educative practices<sup>(1-3)</sup>.

In this context of encouraging, promoting and holding he user co-accountable for self-care, health professionals should serve as partners in monitoring and constructing the plan of self-care targets, motivating the users to find solutions for the barriers faced in self-care practices. When the users are considered as the center of care and they acknowledge the difficulties, the development of solutions becomes concrete, as well as the establishment of targets to overcome them<sup>(4-6)</sup>.

Hence, the academy, in partnership with the primary health care services, develops practices focused on care for Diabetes Mellitus through the dialogical approach. The data for this study derived from home visits by nurses, who departed from the tool Behavior Change Protocol in Diabetes Mellitus, which prioritizes the solution of problems, the construction of an individual plan and the definition of targets, including the assessment of the care plan<sup>(7)</sup>.

In view of that perspective, the objective in this study was to identify barriers and the compliance with targets for the development of self-care practices in chronic patients with type 2 Diabetes Mellitus.

#### **METHOD**

A descriptive and exploratory study was undertaken at three primary health care services in the Eastern region of the city of Belo Horizonte-MG, Brazil in 2014.

The population consisted of 30 type 2 diabetes patients (convenience sample) who complied with the following inclusion criteria: age between 20 and 75 years, time since diagnosis less than 20 years and not having chronic complications related to the diabetes, such as diabetic retinopathy, neuropathies, cardiac diseases, liver diseases, among others. For this study, sex, age,

time since diagnosis, occupation and education level.

The data were collected through home interviews by nursing professionals, based on the tool Behavior Change Protocol in Diabetes Mellitus. This questionnaire consists of 31 open questions, divided in five steps: 1- definition of the problems; 2- identification and approach of the feelings; 3- setting of targets; 4- elaboration of care plan to conquer targets and 5- assessment of care plan<sup>(7)</sup>.

Each user received a home visit that took an average 40 minutes. The answers obtained during the visits, in turn, were included in a database. For analysis, the data inserted in an Excel 2007 worksheet were subject to relative frequency analysis and analyzed using the softwareR version 3.0.3 to verify the most cited factors related to the barriers and compliance with targets for self-careand thus group them in categories by similarity. To describe the users' profile according to the variables considered, a relative frequency table (%) of the categorical variables was used.

The study complied with the Brazilian and international ethical standards for research involving human beings, in compliance with Resolution 466/12<sup>(8)</sup>. The project was submitted to the Research Ethics Committee of the Belo Horizonte Municipal Health Department and received a positive opinion (0024.O.410.203-09<sup>a</sup>).

## **RESULTS**

The sociodemographic characteristics of the 30 users who participated in the research showed that they were Brazilian, adult, 74% elderly (60 years or older), mostly female (70%), living in Belo Horizonte - MG. About 44.4% had been diagnosed with diabetes for five years or less and, as regards the monthly income: 43.3% (1 a 2 salaries/month); 26.6% (2 to 4 salaries/month) and 10% (5 salaries/month). It was observed that most of the users, 53.3%, had not formal instruction or unfinished primary education and that only 6.6% held a higher education degree.

Among the 30 (100%) users who participated in the study, 63.1% presented difficulties related to psychosocial and cultural behaviors, 16.5% to environmental and structural, 3.3% economic, 6.6% related to other factors, and 10% did not consider they had relevant difficulties to take care of their health, as presented in Table 1.

Food appeared as the mean barrier for the

establishment of a diabetes care plan, as 39.9% (12) of the users reported an excessive desire to consume foods rich in saturated fats and sugars. Another factor that stood out is the presence of anxiety in 13.3% of the users (4).

As for the compliance with targets, the users detailed what action they would perform in terms of behavioral change, including dietary habits, exercising and correct medication use. Next, the degree of importance attributed to the behavioral change was associated, such as improved self-esteem, clinical control and quality of life.

As perceived, the planning to comply with the target was significant, as 47.05% of the users committed to change their dietary habits, 23.53% to the adoption of regular exercise and 29.42% to correct medication use, which demonstrates that all users systemized a care plan according to their preference. These data were described in Table 2 below:

#### DISCUSSION

Among the 30 users who participated in the study, 82.9% presented difficulties for self-care, relating them with psychosocial, cultural and environmental factors. In contrast, the entire sample demonstrated willingness to plan and comply with targets, associating them with increased self-confidence and improved quality of life.

The chronic condition of diabetes rests on education and diabetic user-centered care, in a process that results from co-accountability together with the health professional and constructed through different educational strategies. This process requires that health professionals and users acknowledge their specific tasks in the management of diabetes and commit to it. Therefore, the psychosocial, behavioral and clinical aspects involved in

Table 1 – Frequency of Factors Associated with Barriers Related to Self-Care Practice. Belo Horizonte, MG, Brazil, 2014

FACTORS	Relative Frequency (%)	SPECIFICATION		Relative Frequency (%)
PSYCHOSOCIAL AND CULTURAL BEHAVIORS	63.1	Anxiety	4	13.3
		Forgetfulness and medication intake/administration difficulties	2	6.6
		Excessive desire to consume foods rich in saturated fats and sugars	12	39.9
		Sedentariness	1	3.3
		Attendance at social events	2	6.6
ENVIRONMENTAL AND STRUCTURAL	16.5	Unfavorable routine for meal fractioning	2	6.6
		Unfavorable routine for exercising	1	3.3
		Lack of family support	2	6.6
ECONOMIC	3.3	Unfavorable condition	1	3.3
NOT MENTIONED	10	Declared having no difficulties	3	10

Table 2 – Compliance with self-care targets. Belo Horizonte, MG, Brazil, 2014

TARGET COMPLIANCE	SPECIFICATION		Relative Frequency (%)
DETAILS BEHAVIORAL CHANGE	Change dietary habits and become healthy	16	47.05
	Adopt an exercise routine	8	23.53
	Administer and take medicines according to doctor's orientation	10	29.42
	Improve self-esteem and self-confidence	9	30
ASSOCIATED DEGREE OF IMPORTANCE	Improvement of glucose control and test results	3	10
	Improvement of quality of life and healthy life habits	9	30
OTHERS	Not specified		26.6

health care management should be taken into account (9-11).

An author appoints that the main obstacles for self-care include advanced age, education level, low monthly income and lack of family support. They also cite emotional factors like anguishing thoughts, pain, discouragement and frustration about the treatment<sup>(12)</sup>. A study involved 24 diabetic patients inRibeirãoPreto-SP demonstrated that difficulties to control their eating urges remains the main obstacle to be overcome, followed by the difficulty to follow the diet and control negative urges like anger, fear, anxiety and discouragement<sup>(13)</sup>.

It was observed in this study that 39.9% of the users presented difficulties to regulate their diet, as it stands out in all social relations, such as weddings, family, religious and even political meetings. It is around the table that the users play their role as sociable subjects, strengthening their affective relations. Hence, the need to follow a healthy diet can often mean emotional harm to the users and act as one of the main causes of stress related to this condition<sup>(14)</sup>. This fact justifies the result that 6.6% of the users determined participation in social events as a barrier against self-care.

In this scenario, it is important to address the motivation and encourage the users to overcome barriers. Systemized educational interventions that construct a partnership between professional and user, encouraging behavioral change and target achievement more thoroughly, have shown favorable results, addressing the extrinsic motivation<sup>(1,15)</sup>.

Nevertheless, intrinsic motivation shows to be more important to manage self-care and to be better addressed in combination with the construction of a target plan. Like in this study, it is important to guarantee that users themselves set the targets. For one, it can be more significant to have good glucose control through medication while, for another user, feeling well and exercising is a synonym of longevity and quality of life. In addition, some consider the freedom to take care of themselves (or not) as happiness<sup>(15-16)</sup>.

It is interesting to observe that these study results demonstrate that the intrinsic motivation was followed by the degree of importance attributed to the behavioral change. Thirty percent of the users believe that, if they change their behavior, they will improve their self-esteem and self-confidence. Another 30% affirmed that their

quality of life and health will improve. The same barrier specifications were appointed as future actions in the care plan and targets, suggesting that all of them want to overcome the difficulties, but need to prioritize and systemize them.

The Protocol Behavioral Change in Diabetes Mellitus prioritizes the users' reflection and problematization of their daily reality, exploring the barriers and feelings, permitting the discussion of problems and motivating the solution, with a view to behavioral and psychosocial change of the diabetes condition. Agreement in the elaboration of a target plan between health professional and user is considered a prerequisite to obtain good glucose control and treatment satisfaction results<sup>(7)</sup>.

Systemized and planned home visits intend to build a partnership between professional and user, deepening the encouragement to change behaviors and achieve self-care targets, with effective results(1,14). Nevertheless, it is important to guarantee that users establish the targets for better glucose control and quality of life. Setting a target plan in the context of the user's possibilities and ongoing monitoring together with the health professionals can provide support to overcome barriers related to the behavioral and psychosocial aspects<sup>(16-17)</sup>.

As a study limitation, the sample size is mentioned as, in view of the complexity of diabetes treatment, different barriers can emerged, according to the different contexts of users' lives.

#### **CONCLUSION**

The main barriers and targets related to selfcare are related to psychosocial and cultural behaviors. Nevertheless, certain barriers should be reconsidered and addressed with a view to behavioral change and a better quality of life.

In conclusion, the users can seek solutions for the barriers and make informed decisions, appropriate to their health and life context, trying to find solutions to cope with barriers in diabetes self-care.

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